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Collective Psychology as a Correlate of Violence in the International Arena: The Influence of the Victim-Offender Cycle among Groups

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A Thesis in the Field of International Relations

for the Degree of Master of Liberal Arts in Extension Studies

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Abstract

Relentless civil wars, long-standing interstate conflicts, and ongoing human rights abuses by sovereign powers continue to have a devastating effect on civilian populations. Theories seeking to describe and explain the etiology of violence in the international arena promulgate political, economic, and socio-cultural schools of thought while assuming away the specter of psychology. However, the field of psychology has rigorously documented a victim-offender cycle of violence, in which individual survivors of abuse are statistically more likely than members of control groups to subsequently perpetrate violence. I hypothesize that the scope of this phenomenon extends to groups as well as across generations.

A quantitative analysis was performed using scales of conflict intensity, with measures aggregated cumulatively by generation. The findings reveal a correlation between exposure to political crises and subsequent manifestation of high-level political conflict. Thresholds of cumulative duration and intensity of exposure to violence are demonstrated to anticipate subsequent political violence. Moreover, both the intensity and cumulative duration of exposure to violence anticipate the subsequent severity of violence. These outcomes are shown to occur intergenerationally.

This study supports the hypothesis that the victim-offender cycle is patterned and predictable among groups within the international arena. Exploring the influence of psychology in international relations is thus necessary to understanding and addressing vulnerabilities and fostering resilience in the prevention of violence in the international arena.

Trauma in a person, decontextualized over time, looks like personality.

Trauma in a family, decontextualized over time, looks like family traits.

Trauma in a people, decontextualized over time, looks like culture.

— Resmaa Menakem

Dedication

For my parents,

Who raised me with wings to fly,

But also instilled in me a compass,

So that I would always know the way home.

Acknowledgments

I owe a lifetime of profound gratitude to Professor Doug Bond. I had only an idea, a nagging thought that I kept dismissing because I lacked the confidence to voice it. In an abundance of patience, Professor Bond showed me how to bring that idea to life. He instilled confidence in me, not only for the research process, but also to speak with an authority that I had previously failed to claim. More than anything, he helped me reach beyond what I ever imagined of myself.

I owe thanks to two fellow nurses. Over shared nights taking care of twins in pediatric cardiac intensive care, Hani Omar listened to the full range of my disjointed thoughts in the early days of writing. As a crucial contribution to the research, she introduced me to epigenetics. The second was a fellow pandemic nurse in the Bronx. In the chaos of the ICU, we found brief moments to re-experience the lives we had seemingly left behind. He acquainted me with Carl Jung and the collective unconscious, a valuable missing link in the groundwork I had laid. The first COVID wave in New York City is a blur in my mind with only flashes of memories. I have since forgotten every name, but I am grateful for his significant contribution.

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Definition of Terms

Collective: A group that engages in unplanned, disorganized, and reactive activity in contravention of established norms.

Collective Violence: "The instrumental use of violence by people who identify themselves as members of a group – whether this group is transitory or has a permanent identity – against another group or set of individuals" (World Health Organization, 2002, p. 215).

Group: A set of people sharing unifying relationships that adhere to societal norms, and which establish orderly patterns of existence; typically, a subset of a socio-cultural entity.[1]

Violence: As defined by the World Health Organization, "The intentional use of physical force or power, threatened or actual, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment, or deprivation" (World Health Organization, 2002, p. 5).

[1] Groups identified in this research have been victims of violence based on their identity as a group.

Chapter I

Introduction

The physical and psychological suffering and death that accompany violence in the international sphere disproportionately affect civilian populations. International humanitarian law provides protections to civilians and civilian infrastructure in armed conflict, and international human rights law confers safeguards against repression and injustice by sovereign powers in contexts of both peace and war. Yet, violations of protections continue to occur, including indiscriminate and disproportionate attacks in armed conflicts; crimes against humanity and genocide directed against a particular group or civilian population; and human rights violations and oppression that undermine the security and well-being of local and occupied territories.

Displacement, famine, and disease swell in settings characterized by armed conflict and violence due to insecurity and extensive damage to physical and social infrastructure. Furthermore, economic turmoil intensifies in the aftermath of disrupted and ruined livelihoods, the effects of which transcend borders and destabilize entire regions. No less significantly, the destruction of cultural heritage contributes to a sense of loss of cultural history and identity. The ensuing traumatic sequelae reverberate through generations of families and communities.

Despite widespread endorsement of the commitment to strengthening international peace and security, selective political will has frustrated efforts to respond to violence in its diverse manifestations in the international arena. Any desire to intervene

is further complicated by the shadow of unsuccessful and hegemonic humanitarian interventions of the past. The failure to respond imposes a greater burden on the need to prevent the emergence of violence by identifying and attending to vulnerabilities while strengthening factors that promote resilience. Preventing violence, though, necessitates a comprehensive understanding of its causes.

The literature exploring the etiology of violence within international relations focuses predominantly on the influence of political, economic, and socio-cultural factors, while marginalizing the contribution of psychological influences. Yet, the field of psychology has well-documented a victim-offender cycle in which individual survivors of abuse are statistically more likely to become future perpetrators of violence than are individuals who were not abused. Although some groups appear to repeat a similar cycle (as evident in the Israeli occupation and oppression of the Palestinian people only decades after the Holocaust), not all groups demonstrate the same pattern, notably Rwanda. The interpersonal cycle of violence driven by psychological influences deserves further exploration of its scope to ascertain whether it similarly occurs between groups within international relations.

Research Questions and Hypotheses

This thesis explores the question: Are groups of people who have endured a violent political crisis more likely than groups who have not endured a violent political crisis to subsequently manifest collective violence in the form of political conflict?

Subsidiary questions include:

1. (A) Does the intensity of exposure to a violent political crisis establish a threshold that anticipates the subsequent presence or absence of political violence?

(B) Does the cumulative duration of exposure to a violent political crisis establish a threshold that anticipates the subsequent presence or absence of political violence?

2. (A) Does the intensity of exposure to a violent political crisis anticipate the subsequent severity of violence directed toward a targeted group?

   (B) Does the cumulative duration of exposure to a violent political crisis anticipate the subsequent severity of violence directed toward a targeted group?

The central premise of this thesis is that there is a relationship between exposure to violence and the subsequent manifestation of violence. It is hypothesized that a threshold exists that must exceed a certain degree of severity and/or cumulative duration in order to give rise to the cycle of violence. It is anticipated that widespread and protracted suffering and upheaval that destroy the fabric of society would be required to induce a collective of people in sufficient numbers to subsequently traverse a forbidding psychological threshold that leads to inflicting pain and suffering on an autonomous group. It is also hypothesized that the severity and/or cumulative duration of exposure to violent political crises anticipates the subsequent severity of violence directed toward the targeted group. Finally, it is expected that the interval of time between exposure to violence and subsequent perpetration will extend across generations, thereby also supporting the theory of intergenerational transmission of trauma.

Study Objective and Significance

The goal of this analysis is to fill a gap in knowledge in international relations pertaining to an under-appreciated cause of armed conflict that manifests when exposure to violence generates a cycle of violence driven by psychological influences. This research seeks to demonstrate that rather than being manifested exclusively in interpersonal relations, the phenomenon of the victim-offender cycle is patterned and predictable among groups in the international arena. Identifying prior intensity and cumulative duration of exposure to violence as risk factors for the subsequent perpetration of collective violence will add an additional layer of nuance in seeking to address vulnerabilities and foster resilience in the prevention of violence in the international arena.

Chapter II

Literature Review

Early philosophers and historians explored the relationship between human nature and war. Thomas Hobbes, for example, considered "passions" that seek to defend glory and reputation, while Kant wrote, "War . . . seems to be ingrained in human nature, even to be regarded as something noble" (quoted in Abizadeh, 2011). As far back as 300 BC, in his *History of the Peloponnesian War,* Thucydides postulated that a rise in power evokes fear in rivals that leads to war (quoted in Andrewes, 1959, p. 227). As recently as 1947, Morganthau asserted that the *animus dominandi*—man's desire to dominate—is the principal cause of conflict (quoted in Abizadeh, 2011, p. 298).

However, contemporary schools of thought have evolved to view human nature as marginal to the mainstream discourse attempting to elucidate the etiology of armed conflict. Kenneth Waltz' seminal work *Man, the State, and War* (1959) was particularly influential in this regard. Waltz identified three theories explaining state behavior, and categorized the nature and behavior of humans as the "first image." He ultimately dismissed the first-image explanation, arguing that human nature is constant, while human interaction vacillates between peace and war (Waltz, 2018, pp. 16–42).

In a setting of waning interest in probing the relationship between human nature and war in the mid-twentieth century, rational-actor theory and rational decision-making models emerged in international relations discourse—to the exclusion of personality and temperament, instinct and impulse, perception, and emotions. Rational state actors are

assumed to objectively consider available information and probabilities of events to choose a preference (i.e., security-maximizing, power-maximizing, wealth-maximizing) with minimal costs and risks in the implementation of foreign policy. Although Waltz's theory of structural realism does not assume rational state actors, rationality is otherwise widely accepted among esteemed theorists across the liberal–realist divide, and is critical to constructing and applying game theory. Yet, state actors often deviate from the predictions of rational choice theories in their inter-relations with other state actors, including decisions to resort to armed conflict. Although international relations occasionally borrows prospect theory from behavioral economics, the theory accounts for only a limited range of biases. Thus, the field of international relations has predominantly favored glossing over the limitations of contemporary theories explaining decision-making processes.

Beyond the field of international relations, psychoanalysis has explored the belief that humans possess thoughts, feelings, and desires within the subconscious of the human psyche that account for what is perceived to be non-rational and irrational behavior. Psychoanalysis, originating with Sigmund Freud, set aside the philosophical speculation on man and human nature in the abstract and established the empirical study of the individual psyche. Freud's postulations gave rise to two threads of discourse that attempted to explain human violence, including armed conflict: innate instinct and the frustration-aggression hypotheses. The theory of an innate death drive has largely been rejected among contemporary psychoanalytic theorists. However, research regarding the early emotional environment continues to explore the theory of aggression as a defense mechanism in response to childhood insecurity, specifically as a reaction to frustration,

narcissistic injury, humiliation and meaninglessness, and endangerment (for example, see Dollard, Miller, Doob, Mowrer, & Sears, 1939; Fromm, 1973; Kohut, 1972; Mitchell, 1993; Moore, 1964; Weiss, 1952, p. 62). Regardless of the scope of aggression—whether individual, family, wider society, or the international community—psychoanalysis seeks to understand the underlying process that gives rise to violence by bringing the unconscious into consciousness in order to recast the response by means that generate constructive forces.

The elaboration of a collective conscious has been explored by psychoanalysts and social theorists alike, including Emile Durkheim and Carl Jung. They sought to explain how commonalities unify autonomous individuals, leading them to identify as a collective (Demos, 1955, p. 83). Like Freud, Jung viewed the psyche as consisting of separate but interacting conscious and unconscious elements. Accordingly, he expanded the premise of the collective consciousness to include elaboration of a collective unconscious. Despite the divergence of their respective psychologies (owing to Jung's critique of Freud's libido theory), Freud's postulations of phylogenetic (evolutionary) inheritance continued to play a role in Jung's theoretical formulations. Jung, too, proposed that facets of the collective unconscious are inherited from ancestral experiences (Demos, 1955, p. 83). Jung sought proof of the existence of a collective unconscious in mythological motifs and archetypal symbols gleaned from dreams and wakeful fantasy, resulting in widespread disrepute of the theory due to fatalistic and unscientific methods (Demos, 1955, pp. 75–81, 85–86).

Yet, investigations arising in the 1960s revealed a large prevalence of psychopathology among the offspring of Holocaust survivors, providing empirical

support for the intergenerational transmission of trauma (Barocas & Barocas, 1973; Rakoff, Sigal, & Epstein, 1967; Sigal, 1971; Yehuda, et al., 1998). Although the phenomenon has been most rigorously studied among Holocaust survivors and their descendants, similar findings have been reported among other groups:

- Rwandans (Eichelsheim, et al., 2019) and Armenians (Hovin, et al., 2019) in the aftermath of their respective genocides;
- combat veterans, prisoners of war, and war-trauma survivors (Shevlin & McGuigan, 2003, Northern Ireland; Betancourt, et al., 2015, Sierra Leone; Zerach, et al., 2016, Yom Kippur War; O'Toole, et al., 2017, Australian veterans of Vietnam);
- Cambodians in the wake of the Khmer Rouge killings (Munyas, 2008);
- Soviet Ukrainians following the 1932–1933 Holodomor ((Bezo & Maggi, 2015);
- Canadian and Australian indigenous populations as a result of cultural oppression and genocide (Bombay, Matheson, & Anisman, 2014; Grace, Burns, & Menzies, 2016);
- African Americans as a consequence of enslavement (Graff, 2014).

It merits noting, however, that while many studies have revealed an atypical prevalence of psychological distress, not all studies support the finding. Leon, et al. (1981) found no significant differences between the offspring of Holocaust survivors and controls. A 2017 systematic review of the literature exploring the intergenerational transmission of trauma among refugees also identified two studies reporting no differences between the children of survivors and matched control groups, as well as three studies demonstrating mixed findings (Sangalang & Vang, 2016).

Although the field has only recently emerged, epigenetic research supports the intergenerational transmission of trauma in keeping with the phylogenetic postulations

proposed by both Freud and Jung. Studies reveal that biological alterations secondary to emotional trauma may be inherited by subsequent generations (Curry, 2019). These epigenetic alterations affect DNA expression by activating and deactivating genes without altering the DNA sequence itself (Curry, 2019, p. 212). Yehuda and her colleagues demonstrated that DNA methylation, a mechanism that regulates gene expression, was altered in the same location of the FKBP5 gene among Holocaust survivors and their offspring, while control groups remained unaffected (Yehuda, et al., 2016). The FKBP5 gene has been linked to PTSD and depression. It has also been shown to be functionally associated with cortisol levels, which are known to rise during stress responses (Yehuda, et al., 2016). Despite the limitations of correlational studies among humans, experimental studies in this field have demonstrated that descendants of traumatized mice engage in more risk-taking behavior (Curry, 2019, p. 214). The identification of related biomarkers shared by mice and children following exposure to emotional trauma suggest that similar pathways may be involved in humans (Curry, 2019, p. 215).

Although psychoanalytic theory and the collective unconscious influenced the work of Frantz Fanon (1967), he distanced himself from Freud's narrow focus on ontogeny (the study of the individual) as well as both Freud and Jung's conjectures on evolutionary inheritance (Bulhan, 1985, p. 72; Hook, 2004, pp. 119, 124). Fanon's diverging approach to psychoanalysis is clearly articulated in his pioneering work *Black Skin, White Masks:* "It will be seen that the black man's alienation is not an individual question. Beside phylogeny and ontogeny stands sociogeny" (Fanon, 1967, cited in Bulhan, 1985, p. 72). Fanon's collection of work explored relations of power and

violence endemic to colonialization and racism, and sought to expose the interactive influence of collective psychology and political factors in the form of power relations (Hook, 2004, p. 115).

Fanon challenged the proposition that black devaluation is a pre-established biological inevitability (Bulhan, 1985, p. 77; Hook, 2004, p. 124). Rather than inborn and immutable, Fanon proposed a collective unconscious that was acquired through learning. He posited: "There is a constellation of postulates, a series of propositions that slowly . . . with the help of books, newspapers, school and their texts, advertisements, films, radio—work their way into one's mind" (Fanon, quoted in Hook, 2004, p. 119). Fanon's framework, rooted in political contexts of oppression, was thus explicitly social psychological—trauma is socially shared and cultural (Hook, 2004, p. 119).

More recently, Bar-Tal and colleagues (2007, 2009) have contributed to the social psychological discourse on trauma by seeking to explain the nature and evolution of the shared mindset that develops among a group of individuals in the aftermath of perceived harm. It is widely accepted that shared social beliefs serve as the foundation of a common reality, culture, and identity (Bar-Tal, 2007, p. 1443; Bar-Tal, et al., 2009, p. 235). Bar-Tal, et al. posit that a shared trauma bonds individuals within a group in a similar manner (Bar-Tal, et al., 2009, pp. 235, 245). Groups construct powerful cultural narratives in the aftermath of shared trauma through ongoing referencing, in addition to the establishment of time-honored commemorations (Bar-Tal, 2007, pp. 1444-1445; Bar-Tal, et al., 2009, p. 247). Mass violence and oppression motivate parents to share testimonials that establish fear-based survival messages (Bar-Tal, 2007, p. 1444). Similar messages are also imparted by leaders and the mass media, reinforcing the group experience of those

who were exposed to the trauma and bolstering the cautionary warning being transmitted to younger generations (Bar-Tal, 2007, pp. 1444-1445; Bar-Tal, et al., 2009, p. 247). The socially constructed narrative becomes official memory when it is disseminated by government institutions in the form of educational materials and cultural products (e.g., government-sponsored plays, media, and monuments (Bar-Tal, 2007, pp. 1444-1445). The trauma is thereby disseminated among group members, including those who did not experience harm directly, inscribed in the collective memory, and constitutes an element of social identity (Bar-Tal, et al., 2009, p. 236).

Clinical practice has also observed that traumatized parents unconsciously exemplify maladaptive behavior that is imbibed in their offspring. The loss of security, control, and positive identity manifest as "traumatic reliving," "emotional numbing," and "dissociative" processing (Portney, 2003, cited in Manda, 2019). It has been documented that children commonly characterize victimized parents as "damaged," "preoccupied," and "emotionally limited." (Portney, 2003, cited in Manda, 2019). In the absence of effective modeling, subsequent generations fail to establish a worldview that encompasses safety and security (Portney, 2003, cited in Manda, 2019).

Danieli and colleagues (2015) also have reported patterns of behavior manifested by second-generation Holocaust survivors (p. 233). They describe such patterns as being unduly protective of parents and exhibiting an excessive need for control, while also demonstrating immature dependency (Danieli, et al., 2015, p. 233). They refer to the behaviors as reparative adaptational impacts and posit that the second generation unconsciously adopts the patterns of behavior in order to restore safety and security in the world (Danieli, et al., 2015, p. 233; Danieli, Norris, & Engdahl, 2016, pp. 640-641).

Moreover, Staub (2006) proposed that the pervasive feeling of insecurity within the group distorts the general perception and shared worldview, influencing how the group processes information and makes decisions. In responding to conflict, the group may respond with defensive aggression, anticipating that they need to defend themselves (p. 871).

Contemporary discourse in international relations has recently witnessed a renewal of interest in political psychology, inclusive of emotions and "hot cognition," public opinion, neurobiological and evolutionary theories, and reversal of the first image (Kertzer & Tingley, 2018). Yet, despite the growing empirical support for the theoretical postulations of psychoanalysis, research in international relations eschews true interdisciplinary insight and collaboration by often neglecting the true underlying determinants of psychological "buzzwords" (Tetlock & Goldgeier, 2000, p. 95). Additionally, a review of the literature exploring human nature and world politics in 2000 underscored the means by which macro social structures influence psychological processes while also highlighting that macro forces rely on the micro dynamics of human nature (Tetlock & Goldgeier, 2000). In contrast to Waltz's widely accepted presupposition, there is growing recognition that mutual exclusion does not in fact characterize the dynamics at play between micro and macro levels of analysis.

The literature also reveals that rather than representing a deviation from rationality, psychology offers a foundation for understanding the continuum across which rationality varies (Rathbun, Kertzer, & Paradis, 2017). Following decades of neglect, having been superseded by political, economic, and socio-cultural theories, the contemporary landscape in political psychology is expanding in new directions that will

enhance our understanding of the contribution of psychology to politics, foreign relations, and decisions to resort to armed conflict.

Cycles of Violence

The field of psychology has assiduously analyzed a victim-offender cycle of violence seeking to describe and explain the unconscious determinants contributing to interpersonal violence. The discipline has progressively advanced practice by working to mitigate vulnerabilities based on the risk factors identified, while seeking to enhance resilience by fostering the growth and development of protective factors. Although a conflict trap, in which violence begets violence, has been identified and explored in intra-state relations, it overlooks the influence of psychology in contributing to future violence, and remains grossly under-explored with mixed findings on replication. The failure to acknowledge interdisciplinary insight established in the field of psychology has limited the advancement of knowledge in international relations; thereby, constraining the international community's ability to effectively prevent and/or respond to violence in the international arena.

Conflict Trap

A conflict trap among groups in intra-state relations was first proposed by Collier and Hoeffler (2000). They asserted that a conflict trap contributes to a poverty trap and delineate a relationship between civil war, the economic sequelae of civil war, and subsequent war. Specifically, they propose that intra-state armed conflict—defined as violence resulting in at least 1,000 battle deaths—leads to economic regression, while low income and stagnant growth give rise to civil war. Ancillary research further

explored and supported this inference, but a replication with an alternative data source resulted in mixed findings, concluding that the contribution of economic development is ambiguous (Collier & Hoeffler, 2000; Collier, Hoeffler, & Soderbom, 2004; Dahl & Hoyland, 2012; Quinn, Mason, & Gurses, 2007).

A World Bank Policy Research Report (Collier, et al., 2003) entitled *Breaking the Conflict Trap,* revealed that the average post-conflict country has a 44% risk of re-experiencing civil war in the following five years. It stated that approximately half of the established risk is associated with events of a conflict, rather than factors antecedent to a conflict, but is not correlated with variables in the analysis. A significant proportion of the risk is therefore unspecified in the econometric model and remains unexplained by the analysis. While critics point to an insular inquiry that disregards relevant political and social factors, an exploration of the influence of psychology as a causal or driving factor is also absent from the analysis.[2] It is not compelling to assume that human nature is represented by a population that, in sufficient numbers, would engage in armed conflict for ambiguous economic gains, absent relevant psychological influence. It is also implausible to assume that all internal armed conflicts occurring in a sixty-year period are the result of economic motivations driven by greed.

Additionally, although conceptualized over 20 years ago, the conflict trap remains in nascent stages of analysis. Examination of the cycle of violence remains restricted to internal armed conflict, and the operationalization of violence remains a dichotomous variable with no understanding of the discrete effects of violence arising from its

[2] Nathan (2005) provides for a comprehensive critique of the empirical, methodological, and theoretical limitations of Collier and Hoeffler's work with concern for "unreliable results and unjustifiable conclusions."

innumerable manifestations, such as rape as a weapon of war, torture, forced displacement and disappearances, strategic famines, mass atrocities, genocide, etc. Risk is unlikely to be uniformly correlated across these diverse manifestations of violence. Furthermore, in addition to the less-than-exhaustive evaluation of risk factors and vulnerabilities, an analysis of resilience in the presence of the conflict trap is entirely absent.

Hegre, Nygard, and Raeder analyze the conflict trap by evaluating the aggregated impact of its scope and intensity using simulation and forecasting techniques. They explore the degree to which the continuation, recurrence, escalation, and diffusion of internal armed conflict influences the risk of future violence. The authors assert that evaluating the cumulative effects of violence reveals a more significant trap than previously recognized. Their findings convey that a "major armed conflict" in an otherwise non-violent, low-income country, increases the subsequent risk of violence over a period of more than 20 years. The authors' analysis further found that an intervention that prevents a "major armed conflict" that would have lasted a hypothetical four years will see a nine-year counterfactual reduction in violence over the subsequent 20 years (Hegre, Nygard, & Raeder, 2017, pp. 243–261).

Analogous to Collier and Hoeffler (2000), Hegre, Nygard, & Raeder (2017) also restrict the analysis of the conflict trap to internal armed conflict. Notably, however, they expand the evaluation of etiology beyond economic impacts to include social factors that incite and drive the entrenchment of violence. While anger, hate, and fear are referenced, it is a token acknowledgement that fails to veritably explore the contribution of psychology.

Elbadawi, Hegre, and Milante (2008), in addition to Dahl and Hoyland, advocate that an effective post-conflict response is "the most important component in international efforts to bring down the incidence of civil war" (p. 458). However, in order to provide an effective response, the contributing factors sustaining the conflict trap must be identified and quantified in their scope and magnitude of influence, this includes all relevant psychological factors, which have thus far been overlooked.

Victim–Offender Cycle

As early as 1940, Bender and Curran called attention to cases in which children who had attempted to commit murder were noted to have a prior history as victims of abuse (Bender & Curran, cited in Curtis, 1963, p. 386). Observations of the victim–offender cycle continued to be obtained from clinical and legal reports, leading to initial empirical analysis in the 1960s with outcomes suggesting some support for the existence of the phenomenon (see, for example: Duncan, et al., 1958, p. 1755; Curtis, 1963, p. 387; Easson & Steinhilber, 1961, p. 27; Geller & Ford–Somma 1984; Lewis, et al., 1979; Reidy, 1977; Silver, Dublin, & Lourie, 1969; Smith, Berkman, & Fraser 1980, and Steele & Pollock, 1968, as cited in Widom, 1989, p. 6).

An interdisciplinary review of the literature by Widom—including psychology, sociology, criminology, psychiatry, social work, and nursing—determined that the empirical evidence was too limited to infer any conclusions regarding the strength of the cycle of violence (Widom, 1989, p. 4). Widom noted that the evidence was further undermined by weak designs and methodological shortcomings associated with inadequate specificity in defining child abuse and neglect, retrospective recall bias,

second-hand parental reports, weak sampling techniques based on convenience samples, and lack of control groups, among other limitations (Widom, 1989, pp. 4–6).

In a research report submitted to the U.S. Department of Justice, English, Widom, and Brandford (2002) affirmed that research had since resolved many of the earlier methodological concerns (p. 3). Their own analysis matching controls on age, race/ethnicity, gender, and social class revealed that children who had experienced abuse and neglect had a risk of juvenile and adult arrest 4.8 times and 2 times higher, respectively, than matched controls (English, Widom, & Brandford, 2002, pp. 29, 30). The likelihood of arrest for violent crime was also 3.1 times that of matched controls (p. 34). A further review and comparison of three studies, employing different definitions of abuse and methods of analysis across distinct geographic regions, time periods, and age ranges, demonstrated further support for the cycle of violence (English, Widom, & Brandford, 2002, pp. 3-4). But, despite accumulating evidence conferring support for the theory, a 2012 systematic review of the cycle of violence concluded once again that a thin and methodologically weak index of literature continues to undermine the robustness of the evidence (Thornberry, Knight, & Lovegrove, 2012, p. 145).

It is significant that not all victims of childhood abuse and maltreatment subsequently engage in criminal behavior, and still fewer commit violent offenses. Fitton, Yu, & Fazel's meta-analysis found that less than one-fifth of those who experience childhood maltreatment subsequently perpetrate violence (2018, p. 762). Accordingly, researchers have been exploring the range of pathways that both mediate and moderate the relationship between victimization and perpetration. Crucially, an initial tendency to categorize child abuse as a dichotomous variable resulted in research that (1) uniformly

correlated physical, psychological/emotional, and sexual abuse and neglect with subsequent risk, and (2) failed to explore the varying effects of chronicity, frequency, and severity among different types of abuse. Ongoing inconsistencies in defining abuse, as well as measuring the chronicity, frequency, and severity of maltreatment contributed to mixed findings (Malvaso, et al., 2018, p. 36; Malvaso, Delfabbro, & Day, 2016, p. 11). However, several studies indicate that risk is not uniformly correlated across types of abuse (Grogan-Kaylor, et al., 2008, cited in Malvaso, Delfabbro, & Day, 2016, p. 5; Taussig, 2002, cited in Malvaso, Delfabbro, & Day, 2016, p. 5). Additionally, more persistent and extensive maltreatment (inclusive of multiple types of victimization) has been associated with higher rates of delinquency and violent convictions (Hurren, Stewart, & Dennison, 2017; Malvaso, Delfabbro, Day, & Nobes, 2018).

Research has also demonstrated the influence of social factors in the developmental pathway of abuse victims. Wright & Fagan's 2013 investigation explored the moderating role of neighborhood structural and cultural conditions. Although neighborhood cultural norms associated with tolerance for violence were found to increase the propensity for violence, they noted an unanticipated relationship while exploring whether neighborhood disadvantage influenced the victim–offender cycle. They presupposed that the cycle would be exacerbated among individuals living in neighborhoods of lower socio-economic status. Instead, the findings revealed that neighborhood disadvantage weakened the strength of the cycle, thereby indicating that attention to vulnerabilities should, in fact, be directed to affluent communities.

Family features, in particular, have been highlighted as the principal source of antisocial behaviors. Yet, a 2010 meta-analysis advocated caution in contributing to

rhetoric linking familial characteristics to later acts of violence (Derzon, 2010, p. 290). The findings demonstrated a modest correlation between family experiences and antisocial behavior, but fell short of substantiating the widely accepted view that family features are the primary etiological factor responsible for antisocial outcomes (p. 288). Derzon, later supported by Malvaso, Delfabbro, and Day's 2016 review, instead urged that familial characteristics should be viewed as only one among a number of coexisting and covariating factors that play a role in mitigating or exacerbating risk (Derzon, 2010, pp. 288, 290; Malvaso, Delfabbro, & Day, 2016, pp. 10–11).

According to Malvaso, et al. (2018), the most significant predictors of violent convictions among victims of abuse are anger and aggression associated with emotion and behavior dysregulation (p. 40). It has been demonstrated that exposure to trauma, including bullying, domestic violence, physical and sexual assault, armed conflict, terrorism, and forced displacement, impairs the ability to self-regulate emotions (e.g., Ford, 2005; Finkelhor, Ormrod, & Turner, 2009, cited in Ford, et al., 2012, p. 695; Joshi & O'Donnell, 2003, cited in Ford, et al., 2012, p. 695; and Porter & Haslam, 2005, cited in Ford, et al., 2012, p. 695).

It has been further demonstrated that multifaceted and cumulative revictimization results in even greater emotional and behavioral impairment (Anda, et al., 2006, p. 176; Briere, Kaltman, & Green, 2008, cited in Ford, et al., 2012, p. 695). This dysregulation manifests behaviorally as impulsivity, diminished ability to cope with frustration and delayed gratification, and aggression.

Research revealed that aggressive behaviors vary in their purpose. Whereas proactive aggression seeks to harm or control, reactive aggression endeavors to enhance

security (Ford, et al., 2012, p. 698). Trauma-induced aggression has been demonstrated to be correlated with reactive rather than proactive aggression (Ford, Fraleigh, & Connor, 2010, cited in Ford, et al., 2012, p. 698; Marsee, 2008, cited in Ford, et al., 2012, p. 698). However, Ford, et al. (2006) noted that not all trauma survivors who display proactive aggression are "callous and unemotional" (Ford, et al., 2012, p. 698). They may be proactively seeking to defend themselves.

Accumulating evidence in neurobiological research has demonstrated that both anatomical and physiological changes occur in the nervous system following exposure to trauma. A narrow and rudimentary oversimplification of the extensive sequelae reveals the following aberrant processes documented by functional MRI:

(1) persistent activity in the dorsolateral prefrontal cortex in the absence of threatening stimuli, revealing constant scanning for threat detection;

(2) heightened activity in the amygdala (associated with emotion processing) in response to threatening stimuli, demonstrating an exaggerated emotional response to conflict; and

(3) diminished inhibitory input in the circuitry connecting the amygdala and the pregenual cingulate cortex, indicating an absence of cognitive control of emotions (Zhong, et al., 2019; Marusak, et al., 2015). Decades later, even in the absence of violence or threat of violence, prior victims of trauma are biologically predisposed to subvert conventional pathways necessary for information processing and self-regulation, acceding instead to survival-based pathways that adopt aggression as a defense mechanism (Ford, 2005).

While an understanding of vulnerabilities assists in directing preventive efforts, understanding the factors that promote resilience likewise serves to enhance such efforts. More recently, research has evolved to include an inquiry into resiliency in the victim–offender cycle. At the individual unit of analysis, empathy, hope and expectancy, school engagement, peer group affiliations and wider social support have been associated with personal resilience (Lambie & Johnston, 2016; Lambie, et al., 2002; Wilcox, Richards, & O'Keeffe, 2004; Williams & Nelson-Gardell, 2012). A 2013 meta-analysis conducted by Marriott and colleagues demonstrated that the most consistent finding associated with personal resilience was a stable environment, characterized as "a stable and supportive family, stable living arrangements, and a stable education" (Marriott, Hamilton–Giachritsis, & Harrop, 2013). This, conceivably, contributes greater nuance to understanding the perpetuation of the cycle of poverty and conflict advanced by Collier and Hoeffler (2000). The instability of livelihoods common to poverty do not foster stable family conditions, stable living arrangements, or stable education that might otherwise foster the resilience necessary for a population to break free from the conflict trap.

Chapter III

Research Methods

This chapter outlines the database selection process, the operationalization of variables, and data pre-processing. Specific limitations directly related to the methods are addressed throughout.

Database Selection

Consideration was first given to measuring violence using battle deaths data—a measure of civilian and combatant deaths in conflict.[3] Accordingly, databases initially reviewed and evaluated included: Correlates of War (2021); Lacina & Gleditsch's Battle Deaths Dataset (2009); the Political Instability Taskforce Worldwide Atrocities dataset (2020), and Rummel's statistics on democide (2002).

However, battle death data represents only one aspect of violence, and fails to account for (1) violence that may not end in death, for example, rape, forced disappearances, and torture, or (2) the despair experienced as a result of altered social conditions in the context of violence, such as forced displacement; destruction of cultural heritage; increased transmission of communicable diseases and reduced access to health services; and adverse impacts on food production and distribution, leading to war-related malnutrition and famine.

[3] Combatant deaths are distinct from battle deaths. Battle deaths include conflict-related civilian deaths.

Battle death datasets were ultimately abandoned out of preference for scales of conflict intensity, which offered the means to analyze violence using a broader set of indicators. Databases using scales to measure violence at the international level are limited, offering few choices to fit the needs of this study. Each of the following was evaluated for use: the Conflict Barometer from the Heidelberg Institute for International Conflict (HIIC) Research; the International Crisis Behavior (ICB) Project datasets, the Political and Societal Violence Scales, and the Global Peace Index. The decision was made to operationalize the explanatory variables using the ICB datasets, and to use the HIIC Conflict Barometer to operationalize the outcome variables.

The ICB datasets provided system- and actor-level data for interstate and select internationalized intra-state crises extending back to 1918. Despite the lack of specificity in outlining its procedures and criteria for ranking the extent of violence experienced by a crisis actor, it is the only database that offers pre-1946 data. Given that the victim–offender cycle may be a relatively rare phenomenon, the broader temporal scope offered the opportunity to optimize the total number of observations.

Additionally, it is presumed that a temporal lag is inherent in the cycle between exposure to violence and subsequent manifestation of violence. This interval of time is an unknown variable. The broader timeframe enhances the opportunity to observe cycle fulfillment. The year 2007 was selected as the terminal year of the explanatory dataset to allow for the temporal lag in the evaluation of the outcome variables up to the present-day. Accordingly, the temporal scope of the explanatory variables extends from 1918 to 2007.

The Conflict Barometer was favored to operationalize the outcome variables due to the integration of five indicators of violence within its measure of conflict intensity for a wide range of conflicts, including interstate, intra-state, trans-state, and sub-state. The indicators include: (1) weapons type and employment, (2) the number of personnel involved, (3) the number of casualties as a direct consequence of violence in a region-month, (4) the flow of cross-border refugees and internally displaced persons in a region-month, and (5) the amount of destruction of civil systems and structures in a subnational unit-month. In addition to providing a broader set of indicators, its methodology allowed for the inclusion of non-lethal violence in the form of displacement and destruction of social and economic infrastructure.

However, these measures of violence are not comprehensive. Torture, rape, and forced disappearances are not measured, and fatalities resulting from indirect effects such as famine and disease remain unaccounted. Coding of the conflict between Iran and the United States for the years 2015 to 2019, for example, does not take into consideration the widespread structural violence inflicted on the civilian population via economic sanctions.[4] Although targeted sanctions are preferred by the international community to limit civilian suffering, the effects of sanctions continue to have broad consequences. Human Rights Watch (2019) reported that the health of Iranians has been negatively impacted by limited access to medical supplies and medications. Furthermore, economic growth contracted in Iran following the imposition of sanctions resulting in a deep recession (BBC News, 2019).

[4] Although the interstate conflict between Iran and the United States started in 1979, no intensity level is coded for 2014. The intensity level in 2020 was coded as a 3 following the U.S. drone strike that killed Commander Qassem Soleimani.

Meanwhile, the unemployment rate has increased, and the Iranian rial was devalued, limiting the purchasing power of Iranians and eroding their savings while the cost of living has increased with the onset of inflation (BBC News, 2019; Human Rights Watch, 2019). Inflation has had a significant impact on the cost of food, leading to food insecurity that has disproportionately impacted rural inhabitants (BBC News, 2019; Human Rights Watch, 2019). Accordingly, recognition and inclusion of the profound effects of structural violence might anticipate higher conflict scores if measures of violence were more comprehensive.

The reference years of 2014 to 2020 were used to identify a list of political conflicts and their associated data for analysis. Although the HIIK database offers conflict intensity ratings dating back to 1992, the methodology used in the operationalization of indicators of violence has been revised and restructured since the inception of the database. The reference years of 2014 to 2020 offer the most refined data based on a consistent methodological approach.

Many conflicts identified during the reference years began prior to 2014 and are still ongoing, some with start dates extending back to 1825. In determining the parameters of the temporal scope of the outcome dataset, consideration was given to the following three determinants: (1) the temporal scope of the explanatory dataset, (2) the need for a temporal lag between the explanatory and outcome variables based on the assumption that violence may not immediately trigger subsequent violence, and (3) the requirements for an inter-generational analysis. The decision was made to initiate the temporal scope of the outcome dataset in 1948 to provide a generational lag for the inter-

generational analysis. The temporal scope of the outcome dataset terminates at the end of 2020.

Measures

The explanatory and outcome variables are operationalized in the following sections.

Explanatory Variables

This study evaluated cumulative exposure to violence, as well as cumulative intensity of violence, using variable 52 ('VIOL') of the actor-level dataset (v. 13) from the ICB database. The variable ranks the extent of violence experienced by a crisis actor during an international political crisis on a four-point scale. This study operationalized violence as a peak level of 2 (minor clashes), 3 (serious clashes), or 4 (full-scale war) over the duration of the crisis. A peak level of 1 (no violence) serves as a control group.

Cumulative exposure to violence is operationalized as an event count within any given year. When the conditions for violence are met, given by a peak intensity level >=2, then $X_i=1$; otherwise $X_i=0$. Cumulative exposure to violence is further aggregated by generation for the intergenerational analysis.

The mean intensity of cumulative exposure is calculated by averaging the annual peak exposure to violence over the number of conflict exposures. The inclusion of mean intensity serves to enhance the interpretation of the analysis by reflecting the effects of cumulative exposure to the annual conflict intensity. The mean intensity of cumulative exposure is further aggregated by generation for the intergenerational analysis.

The cumulative duration of exposure to violence is operationalized using variable 5 ('BREXIT') of the system level dataset (v. 13) of the ICB database. It is measured in days from the date of perception of a crisis by any actor involved, to the date on which every actor perceives the crisis to be resolved.[5] Days of exposure are further aggregated by generation for the intergenerational analysis.

Outcome Variables

The subsequent manifestations of violence, representing the second stage of the cycle of violence, and the intensity of the subsequent manifestations of violence are operationalized via the 'intensity' rating of the Conflict Barometer. The rating measures peak violence on a five-point scale: 1 (disputes), 2 (non-violent crisis), 3 (violent crisis), 4 (limited war), and 5 (war). Levels 1 and 2 serve as control groups.

The subsequent manifestations of violence are operationalized as event counts. When the conditions for violence are met, given by a peak intensity level >=3, then $Y_i=1$; otherwise $Y_i=0$. The subsequent manifestations of violence are further aggregated by generation for the intergenerational analysis.

The mean intensity of subsequent violence is calculated by averaging the annual peak manifestations of violence over the number of subsequent conflicts. The inclusion of mean intensity serves to enhance the interpretation of the analysis by reflecting the cumulative effects of the annual conflict measures. The mean intensity of subsequent violence is further aggregated by generation for the intergenerational analysis. Table 1 provides a summary of hypotheses and variables.

[5] This definition resulted in missing data in the ICB dataset when crisis actors do not perceive that a resolution has been achieved. This is addressed in the section on data pre-processing.

Table 1. Summary of Hypotheses and Variables.

Hypotheses	Variables	
Central		A correlation exists between group exposure to violence and subsequent manifestations of collective violence, further presupposed to occur intergenerationally.
	Explanatory	ICB variable 52 'VIOL' of the actor level dataset (v.13) – attaining a peak level of 2, 3, or 4 over the cumulative duration of exposure to crisis(es) further aggregated by generations.
	Outcome	CB variable 'intensity' rating - attaining a peak rating of 3, 4, or 5 during the reference years 2014-2020, further aggregated by generations.
H1		A threshold of exposure exists that must exceed a minimum intensity of cumulative violence in order to anticipate the subsequent manifestation of collective violence.
	Explanatory	ICB variable 52 'VIOL' of the actor level dataset (v.13) – attaining a peak level of 2, 3, or 4 over the cumulative duration of exposure to crisis(es) + the mean intensity of exposure to cumulative violence.
	Outcome	CB variable 'intensity' rating - attaining a peak rating of 3, 4, or 5 during the reference years 2014-2020 + the mean intensity of subsequent manifestations of violence.
H2		A threshold of exposure exists that must exceed a minimum cumulative duration of violence in order to anticipate the subsequent manifestation of collective violence.
	Explanatory	ICB variable 5 'BREXIT' of the system level dataset (v.13) – measured in days and cumulated across conflicts.
	Outcome	CB variable 'intensity' rating - attaining a peak rating of 3, 4, or 5 during the reference years 2014-2020 + the mean intensity of subsequent manifestations of violence.
H3		The cumulative intensity of violence experienced by the group anticipates the intensity of the subsequent manifestation of violence.
	Explanatory	ICB variable 52 'VIOL' of the actor level dataset (v.13) – attaining level 2, 3, or 4 over the cumulative duration of exposure to crisis(es) + the mean intensity of exposure to cumulative violence.
	Outcome	CB variable 'intensity' rating - attaining a peak rating of 3, 4, or 5 during the reference years 2014-2020 + the mean intensity of subsequent manifestations of violence.
H4		The cumulative duration of violence experienced by the group anticipates the intensity of the subsequent manifestations of violence.
	Explanatory	ICB variable 5 'BREXIT' of the system level dataset (v.13) – measured in days and cumulated across conflicts.
	Outcome	CB variable 'intensity' rating - attaining a peak rating of 3, 4, or 5 during the reference years 2014-2020.

Source: thesis author

Data Pre-Processing

Data pre-processing of both the explanatory and outcome datasets involved filtering according to inclusion and exclusion criteria, addressing inaccurate data, and replacing missing values.

Explanatory Dataset

A list of international crises and their associated data was obtained from the ICB database for the period 1918 to 2007. The ICB data collection procedures limited crisis actors to "sovereign states and recognized members of the international system" (Brecher & Wilkenfeld, 2000, p. 41), thereby limiting this study's definition of exposed group to a state in which violence occurred within internationally recognized, present-day territorial borders. Consequently, all non-state-based populations that have been exposed to violence, such as Kurds, Palestinians, exiles, and refugees, are notably absent from this analysis. An additional 17 crises (involving 20 crisis actors) limited to violence directed at an aircraft in flight, a ship or submarine in open water, or an embassy targeted in a foreign country, were excluded from analysis due to their location outside territorial borders.

Additionally, the ICB does not account for intra-state conflicts unless they have an internationalized dimension. The Guatemala crisis, for example, accounts for the initial overthrow of the standing regime (peak intensity =2, duration 200 days), but the civil war and internal strife that lasted for 35 years and led to the death of 100,000 to 200,000 civilians is omitted (Duke University & USC Dornsife, 2004). It is significant key cases of notable historical violence in the international arena are missing from this

study's dataset, for example, the Armenian genocide,[6] apartheid in South Africa, the violence in occupied Palestinian territories, the cultural genocide of indigenous populations in Canada and Australia, etc. All undocumented cases of violence and unidentified groups exposed to violence in the international arena will contribute to systematic error in the process of statistical modeling.

Accurately identifying the parties exposed to violence was critical to ensuring the validity of both the measures and the findings. Although the ICB variable 45 ('CRACTLOC') of the actor-level dataset (v. 13) codes the distance of the crisis actor from the location of the crisis, colonialism, independence movements, the dissolution of states (e.g., USSR, Yugoslavia), and the exchange of territory during or following conflict, generated cases in which variable 45 did not accurately identify the crisis actor(s) that were exposed to violence. The Third Afghan War, for example, coded variable 45 for the United Kingdom as home territory. At the time of the conflict in 1919, the United Kingdom was acting through British India. Afghan troops obstructed the water supply to Landi Kotal, which is in present-day Pakistan. It was, therefore, Pakistani civilians who were exposed to the crisis, rather than civilians of the United Kingdom.

Given the number of cases in which this was noted to have occurred, a manual review of each crisis summary was conducted in order to accurately identify the crisis actor(s) exposed to violence. During the manual review of the crisis summaries, a further 54 crisis actors were identified that were exposed to violence within their territorial borders during a recognized crisis, yet were not included in the ICB database. Relevant cases are, therefore, missing from the dataset. Additionally, three crises in the ICB

[6] Although it began in 1915, the decimation of the Armenian population continued until 1923.

dataset had missing duration data due to uncertainty regarding when the crisis ended because of a lack of perception of a resolution. In the case of crisis 179, the crisis summary stated that it terminated "after about a year," and duration was thus coded as 365. Less information was available in the synopses of the two remaining crises. In those cases, crisis termination was determined by the date of the last act of violence or pertinent negotiation included in the synopsis.

Pre-processing filtered out 231 cases in which a state was a participant in violence that occurred outside of its territorial borders. A total of 555 cases remained for analysis. These cases were aggregated by generational exposure (1918–1947, 1948–1977, 1978–2007, see Figure 1), and in Figure 2 are cumulated to a historical exposure, providing measures of the duration, peak, and mean intensity of exposure to violence. Inter-generational analysis evaluated explanatory generations relative to all subsequent outcome generations.

Historical Group-Violence	Generations	Distant Past	1918-1947
		Mid-Past	1948-1977
		Recent Past	1978-2007
		Present	2008-2020

Figure 1. Group Violence, Aggregated by Generations.

Source: thesis author

Explanatory Generation	Outcome Generations
Distant past	Mid-past, Recent past, Contemporary
Mid-past	Recent past, Contemporary
Recent past	Contemporary

Figure 2. Analysis of Intergenerational Correlations.

Source: thesis author

Outcome Dataset

A list of political conflicts and their associated peak intensities was obtained from the HIIK database for the reference years of 2014 to 2020. For crises emerging during the reference years, the measures reflect the peak and mean intensity of violence over the duration of the conflict. But, for long-standing conflicts that emerged prior to and were still ongoing in 2014, the measures provide only a six-year sample of the peak and mean intensity of violence rather than a comprehensive overview of peak and mean violence from its inception.

Such a sample, drawn decades after the start of a conflict, risks providing a measure of conflict intensity that reflects tit-for-tat behavior. The desire for retribution that drives tit-for-tat behavior reflects a different underlying psychological determinant than the phenomenon under investigation. Filtering long-standing conflicts out of the dataset would avoid the use of measures that reflect a shift away from the phenomenon under investigation, but would also limit the dataset to 66 cases with a narrow window

for the subsequent manifestation of violence. The decision was made to retain the long-standing conflicts.

This study's definition of exposed group—a state in which violence occurred within present day territorial borders—necessitated the removal of the European Union as a crisis actor in the 1979 and 2007 conflicts, as coded by HIIK. The 1948 and 2007 conflicts involving Palestine as a crisis actor were also removed from the study dataset given that Palestine was not recognized in the ICB database. A total of 578 conflicts remained for analysis.

Missing data for annual conflict intensity occurred in 215 cases. These cases were interpreted to represent years in which violence was negligible and accordingly, they were coded as 0. These cases were subsequently aggregated by generational manifestations of violence (1918-1947, 1948-1977, 1978-2007) and cumulated to a historical exposure (Figure 3), providing measures of the peak and mean intensity of subsequent violence. Intergenerational analysis evaluated explanatory generations relative to all subsequent outcome generations (Figure 4).

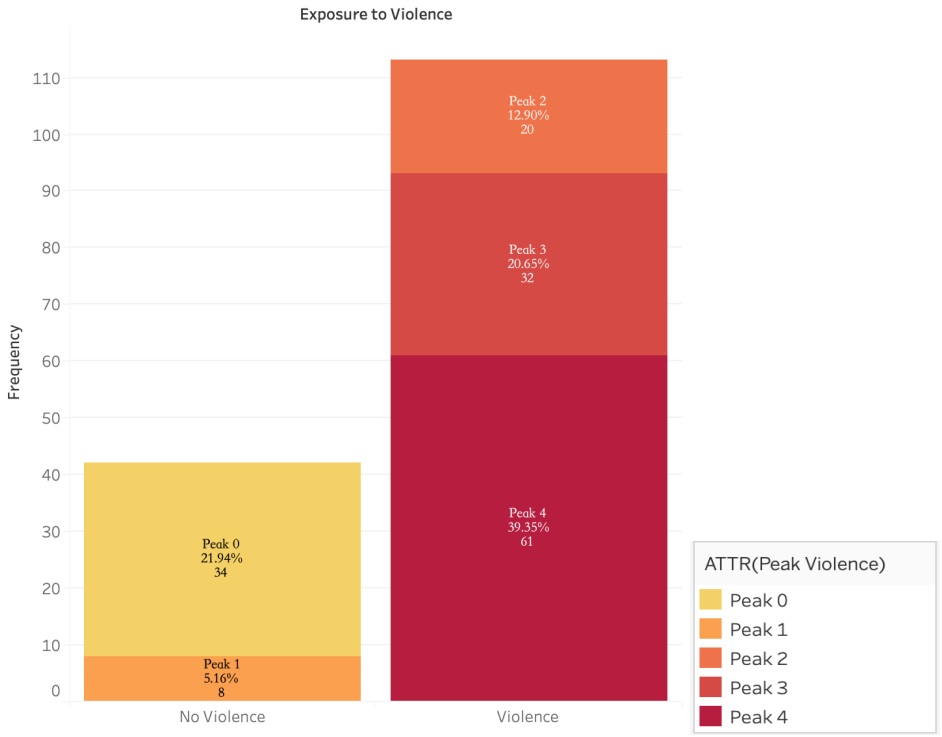

Figure 3. Predictor Variable—Peak Frequencies.

Frequency of the presence or absence of violence experienced during political crises for the years 1918–2007, expressed as both a sum of occurrences and percent of the total.

Source: thesis author

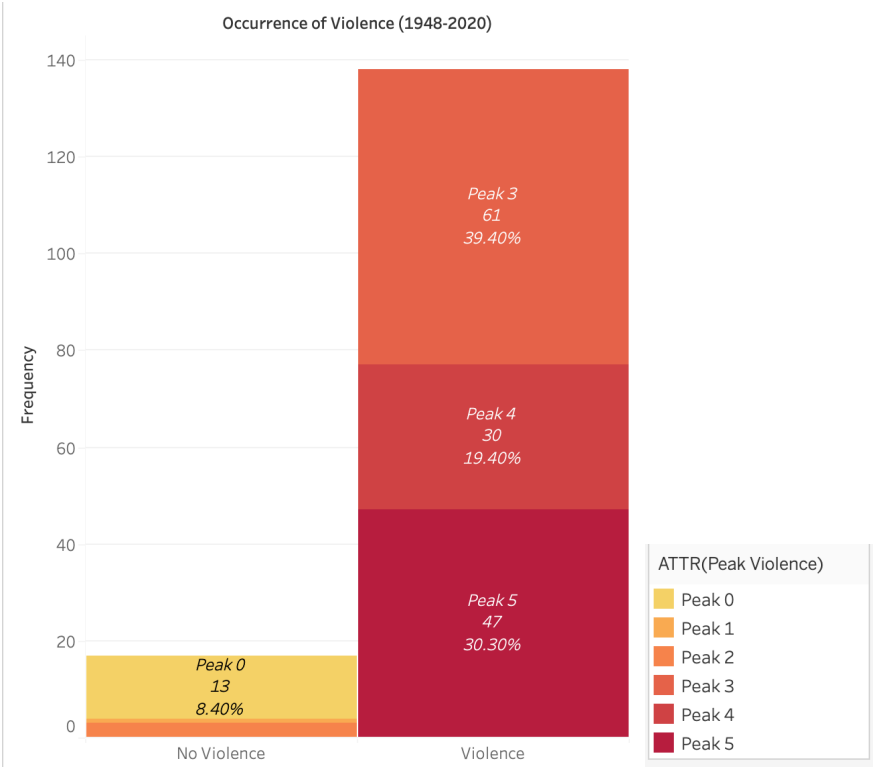

Figure 4. Outcome Variable—Peak Frequencies.

Frequency of the presence or absence of violence experienced during political conflict for the years 1948-2020, expressed as both a sum of occurrences and percent of the total (Peak 1: frequency=1, percent=0.6%; Peak 2: frequency=3, percent=1.9%).

Source: thesis author

Chapter IV

Results

This chapter presents the results of analysis. The initial descriptive analysis is summarized in the following Tables 2, 3, and 4.

Table 2. Explanatory Variables (1918-2007).

Variable	*N*	*Mean*	*Std. Dev.*	*Min*	*Max*
Peak	155	2.48	1.63	0	4
Mean	155	0.55	0.50	0	2.11
Duration	155	509.69	654.73	0	3048
Number	155	2.72	3.15	0	15

Notes: N = the number of group-year observations
Mean = mean value
Std. Dev. = standard deviation
Min = minimum value
Max = maximum value
Duration = days

Source: thesis author

Table 3. Outcome Variable—Binary (1948–2020).*

Variable	*Española*	*Mean*	*Std. Dev.*	*Min*	*Max*
Occurrence of Violence	155	0.89	0.314	0	1

* The occurrence of violence is denoted as a dummy variable that represents violence (Yi = 1) relative to the benchmark of no violence (Yi = 0).

Source: thesis author

Table 4. Outcome Variable—Magnitude (1948–2020).

Variable	*N*	*Mean*	*Std. Dev.*	*Min*	*Max*
Peak Occurrence of Violence	155	3.52	1.397	0	5

Source: thesis author

Binary logistic regression was performed to ascertain whether prior exposure to violent political crises is correlated with subsequent manifestations of violent political conflict (see Figure 5). Exposure to violence, operationalized by ICB peak intensity of 2, 3, and 4 was evaluated for statistical significance in relation to the dichotomous presence or absence of subsequent violence; subsequent presence of violence (Yi=1) defined as HIIK peak intensity of 3, 4, and 5, and absence of violence (Yi=0) defined as peak intensity of 0, 1, and 2.

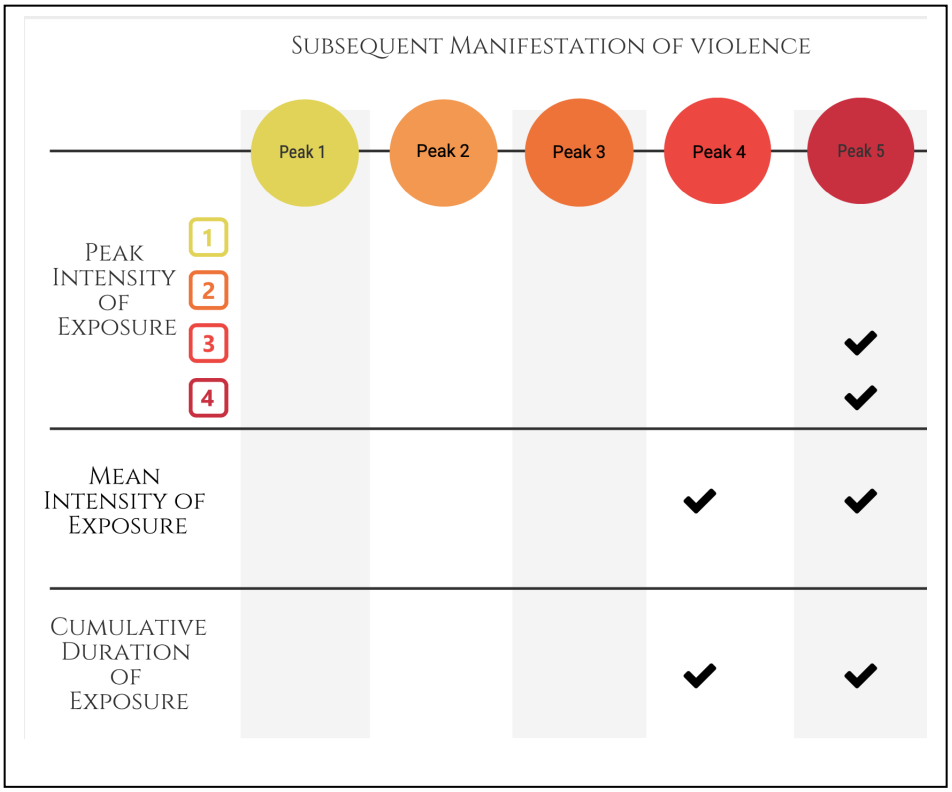

Figure 5. Outcomes of Binary Logistic Regression.

Influence of cumulative duration, peak, and mean intensity of exposure on the subsequent manifestation of violence.

Source: thesis author

The model was found to lack statistical significance, $X^2(1)=0.126$, p=0.722 (see Table 5a). However, exposure to violence characterized by a peak intensity of 3 and 4 (serious clashes and full-scale war) was determined to be statistically significant for subsequent manifestations of war (level 5), $X^2(1)=4.408$, p=0.036 (see Table 5a). This finding indicates that exposure to violent political crises is associated with subsequent manifestations of high-intensity political conflict, but a higher level of violence than originally hypothesized is necessary to precipitate the associated relationship.

Table 5a. Coefficients for the Presence or Absence of Subsequent Violence: Peak Intensity.

Peak = 5	*B*	*S.E.*	*p*	*Odds*	*Log*	*95% C.I.*
Peak Exp. = 3 & 4	0.776	0.379	0.041	2.172	185.799	1.033 – 4.566

N = 155
Source: thesis author

A one-way ANOVA confirmed the results of the binary logistic regressions; thereby, enhancing the reliability of the findings. Political crises were classified into two groups: no violence was operationalized as peak = 0, 1, and 2 (M = 3.21, SD = 1.461) and violence was operationalized as peak = 3 & 4 (M= 3.72, SD = 1.322). The results

demonstrated statistically significant differences between the presence and absence of exposure to violence, $F(1,153)=5.102$, $p<=0.025$[7]

The above findings were also supported by statistically significant results for cumulative duration of exposure to violent crises, as well as mean intensity of exposure, and the subsequent presence or absence of political conflict (see Table 5b and Table 5c).[8] The findings indicate that the cumulative duration of exposure to violence at all levels of intensity yields statistically significant correlations with subsequent occurrences of limited war and war (levels 4 and 5), $X^2=6.516$, $p<=0.011$. This suggests that persistent exposure to violence has a cumulative effect on survivors that when manifested tends toward higher levels of subsequent manifestations of violence. The overall mean also demonstrates a statistically significant association with subsequent occurrences of limited war and war (levels 4 and 5), $X^2=8.324$, $p<=0.004$. Thus, both increasing duration and increasing mean intensity of exposure to violent political crises are associated with an

[7] Homogeneity of variances was assessed and confirmed by Levene's test, p=0.929. Five outliers were identified via inspection of a box plot with values greater than 1.5 box-lengths, but less than 3 box-lengths, from the edge of the box. Data entry errors were ruled out. The outliers are accepted as genuinely unusual cases and were retained in the analysis. Normality was initially assessed via the Shapiro-Wilk test and normal Q-Q plot. Per the Shapiro-Wilk test, the data was not normally distributed ($p<=0.005$); conversely, the normal Q-Q plot visually demonstrated normal distribution. Given that the Shapiro-Wilk test reports minor deviations from normality as statistically significant when sample sizes are greater than 50, the Kolmogorov-Smirnov test and histogram were evaluated. Both indicated that the data was not normally distributed. The skewness and kurtosis scores for the explanatory category of violence were also beyond the parameters of -1 and 1 respectively. Accordingly, the dependent variable was transformed via a 'reflect and square root' transformation. Although the skewness and kurtosis values improved, with some improvement in the histogram, and continued normality visualized in the normal Q-Q plot, both the Shapiro-Wilk and Kolmogorov-Smirnov tests remained statistically significant. Due to the negligible change in the overall significance of the ANOVA, the results of the un-transformed data were retained for analysis.

[8] Linearity of the continuous variables with respect to the logit of the dependent variable was assessed in the performance of all binary logistic regressions via the Box-Tidwell procedure. Although the procedure lacks power in detecting slight departures from linearity, it avoids over-fitting the data and poorly modeling the population. Based on this assessment, all continuous explanatory variables were found to be linearly related to the logit of the dependent variable. In all cases, the presence of outliers was assessed and ruled-out using case-wise diagnostics.

increased likelihood of subsequent manifestations of high-level political conflict. The findings, additionally, support the interpretation that the effects of longer, sustained exposure are cumulative.

Table 5b. Coefficients for the Presence or Absence of Subsequent Violence: Duration of Exposure.

Peak = 5	*B*	*S.E.*	*p value*	*Odds*	*Log*	*95% C.I.*
Duration of Exposure	0.001	0.000	0.009	1.001	183.086	1.000 - 1.001
Peak = 4 & 5						
Duration of Exposure	0.001	0.000	0.016	1.001	208.353	1.000 - 1.001

N = 155

Source: thesis author

Table 5c. Coefficients for the Presence or Absence of Subsequent Violence: Intensity of Exposure.

Peak = 5	*B*	*S.E.*	*p*	*Odds*	*Log*	*95% C.I.*
Mean Intensity of	0.778	0.345	0.024	2.177	185.040	1.108 – 4.277
Peak = 4 & 5						
Mean Intensity of	0.968	0.351	0.006	2.633	206.545	1.323 – 5.241

N = 155

Source: thesis author

Multiple logistic regression was performed to evaluate the interaction between peak and mean intensity of exposure to violent political crises with the subsequent manifestation of political conflict. Both peak and mean intensity were found to be non-significant in the setting of exposure to lower levels of peak violence, characterized as minor clashes and serious clashes (levels 2 and 3). Yet, when exposure to peak violence reached an intensity level consistent with full-scale war (level 4), the influence of peak intensity became statistically significantly correlated with subsequent manifestations of violence (levels 4 and 5), while mean intensity of exposure remained non-significant, X^2=13.193, p<=0.004 (see Table 5d). These results demonstrate that in the setting of

exposure to extreme intensities, violence need not be sustained in order to lead to subsequent violence. However, the results also indicate that high peak intensities of exposure are also associated with a definitive defeat or intervention, and hence no future violence.

Table 5d. Coefficients for the Presence or Absence of Subsequent Violence: Effects of Peak and Mean Intensity.

Peak = 4 & 5	*B*	*S.E.*	*p*	*Odds*	*Log*	*95% C.I.*
Mean Intensity of	0.520	0.675	0.441	1.682	201.677	0.448 – 6.313
Peak Exp. = 4	-1.612	0.768	0.036	0.200	~	0.044 – 0.899
Interaction Term	1.713	1.012	0.090	5.546	~	0.764 –

N = 155
Source: thesis author

Additionally, multiple linear regression was run to evaluate the correlations between duration, mean and peak intensity of exposure with the mean intensity of subsequent occurrences of political conflict.[9] The regression of the three competing independent variables statistically significantly predicted the mean intensity of subsequent violence, $F(3,152)=16.242$, $p<0.0005$ (see Table 6).

Table 6. Coefficients for the Subsequent Manifestation of Violence: Duration of Exposure, Mean Intensity, and Peak Intensity.

Subsequent Mean Intensity	R^2	$Adj.R^2$	*B*	*S.E.*	*p value*	*95% C.I. B*
Mean Intensity Exp.	0.244	0.229	0.287	0.094	0.003	0.101– 0.473
Peak Intensity of Exp.	~	~	-0.063	0.024	0.009	-0.110 - -0.016
Duration of Exp.	~	~	0.000	0.000	0.012	0.000 – 0.000

N = 155
Source: thesis author

[9] Multicollinearity of the independent variables was assessed and ruled out via VIF scores, which ranged from 2.413 to 3.832.

All three explanatory variables added statistically significantly to the prediction. Notably, neither peak nor mean intensity of exposure is statistically significant when regressed with cumulative duration, unless regressed together. This finding indicates that in the setting of prolonged duration of exposure, the intensity of violence must be both severe and sustained in order to significantly contribute to the subsequent violent outcome.

The Threshold of Intensity of Exposure to Violence

In addition to revealing that a threshold of exposure characterized by serious clashes and full-scale war (levels 3 and 4) anticipates subsequent war (level 5)(refer back to Table 5a), binary logistic regression was used to evaluate the threshold of mean intensity of exposure that anticipates the subsequent presence or absence of political conflict. Findings revealed that mean intensity of exposure >=1.5 yields a statistically significant correlation with subsequent war (level 5), X^2=3.911, p<=0.048 (see Table 7a). However, a mean intensity of exposure >=1.8 is necessary to yield a statistically significant correlation with subsequent limited war and war (levels 4 & 5), X^2=5.551, p<=0.018 (see Table 7a). All lesser mean intensities of exposure remained statistically non-significant.

Table 7a. Coefficients for the Mean Threshold of Subsequent Violence.

Peak = 5	*B*	*S.E.*	*p*	*Odds*	*Log*	*95% C.I.*
Mean Intensity Exp.	0.901	0.458	0.049	2.461	170.624	1.003 – 6.038

N = 145

Peak = 4 & 5	*B*	*S.E.*	*p*	*Odds*	*Log*	*95% C.I.*
Mean Intensity Exp.	0.844	0.368	0.022	2.326	205.061	1.132 – 4.780

N = 152
Source: thesis author

Linear regression was also performed to evaluate the threshold mean intensity of violence that anticipates the subsequent mean intensity of violent political conflict.[10] Comparable to the binary logistic regression with a peak outcome of 5, a mean intensity of exposure >=1.5 yields a statistically significant correlation with the subsequent mean intensity of violence, $F(1,143)=4.218$, $p<=0.042$ (Table 7b). All lesser mean intensities of exposure remained statistically non-significant. These findings indicate that thresholds of peak and mean intensity of exposure to violent political crises anticipate subsequent political conflict.

Table 7b. Coefficients for the Mean Threshold of Subsequent Violence.

Subsequent Mean Intensity	R^2	*Adj .R^2*	*B*	*S.E.*	*p value*	*95% C.I. B*
Mean Intensity Exp. >=1.5	0.029	0.022	0.124	0.061	0.042	0.005 – 0.244
N = 145						

Source: thesis author

The Threshold of Cumulative Duration of Exposure to Violence

Binary logistic regression was run to determine the threshold of the cumulative duration of exposure that anticipates the subsequent presence or absence of political violence. Findings revealed that cumulative duration greater than five years yields a statistically significant correlation with subsequent occurrences of limited war and war (levels 4 & 5), $X^2=4.178$, $p<=0.041$ (Table 8a). All lesser cumulative durations of exposure remained statistically non-significant.

[10] Linearity, homoscedasticity, and normality of the residuals in all linear regressions were confirmed via visual inspection of scatterplots; plots of the standardized residual values against the standardized predicted values; and histograms and normal probability plots, respectively. In all cases, unless otherwise indicated, the presence of outliers was assessed and ruled out using case-wise diagnostics.

Table 8a. Coefficients for the Cumulative Duration Threshold of Subsequent Violence: Duration of Exposure >5 years.

Peak = 5	*B*	*S.E.*	*p*	*Odds*	*Log*	*95% C.I.*
Duration of Exp. >5 years	0.001	0.000	0.025	1.001	176.520	1.000 - 1.001
Peak 4 & 5						
Duration of Exp. >5 years	0.001	0.000	0.045	1.001	203.659	1.000 - 1.001

N = 150

Source: thesis author

Linear regression was also performed to evaluate the threshold duration that anticipates the subsequent mean intensity of violent political conflict. Comparatively, the findings revealed that a cumulative duration of only 2.5 years yields a statistically significant association with the subsequent mean intensity of violence, $F(1,121)=6.090$, $p<=0.015$ (Table 8b); indicating that sustained violence can be predicted at a lower threshold than the extremes of peak violence. These results demonstrate that a threshold of cumulative duration of exposure to violent political crises anticipates subsequent political conflict.

Table 8b. Coefficients for the Cumulative Duration Threshold of Subsequent Violence: Duration of Exposure >2 years.

Subsequent Mean Intensity	R^2	*Adj .*R^2	*B*	*S.E.*	*p value*	*95% C.I. B*
Duration of Exp. > 2 years	0.029	0.022	0.124	0.061	0.042	0.005 – 0.244

N = 123

Source: thesis author

The Influence of Intensity on the Subsequent Severity of Violence

Binary logistic regression served to evaluate the influence of both the peak and mean intensity of exposure on the subsequent severity of the peak intensity of violence. As reported earlier, exposure to serious clashes and full-scale war (levels 3 and 4) leads to subsequent war (level 5) (refer back to Table 5a). Accordingly, the two highest peak

intensities of exposure are associated with the highest peak intensity of subsequent violence. Above findings also revealed that mean intensity of exposure leads to subsequent limited war and war (levels 4 and 5) (refer back to Table 5c). Thus, increasing mean intensity of exposure to violent political crises is correlated with the highest peak intensities of subsequent violence. These findings indicate that both high levels of peak and mean intensity of exposure to violent political crises lead to the highest peak intensities of subsequent political conflict.

Linear regression further supported the above findings in the evaluation of the influence of both the peak and mean intensity of exposure on the subsequent severity of the mean intensity of violence. Exposure to serious clashes and full-scale war (levels 3 and 4) was found to be statistically significantly correlated with the mean intensity of subsequent occurrences of political conflict, $F(1,153)=9.345$, $p<=0.003$ (see Table 9a).[11] Thus, for every unit increase in the peak intensity of exposure to violence, the mean intensity of subsequent political conflict increased by 0.167 units. Additionally, the mean intensity of exposure was determined to be statistically significantly associated with the mean intensity of subsequent manifestations of violence, $F(1,153)=32.212$, $p<=0.005$ (see Table 9b). As a result, for every unit increase in the mean intensity of exposure, the subsequent mean intensity of violence increased by 0.284 units. Accordingly, these findings reveal that both increasing peak and mean intensities of exposure to violent political crises are associated with increasing severity of the mean intensity of subsequent manifestations of political conflict.

[11] Casewise diagnostics in both regressions revealed one standardized residual (case = India) with a value greater than 3 standard deviations from the predicted value. Data-entry accuracy was confirmed and the regressions were run with and without the case. The results of both regressions remained statistically significant with negligible differences in confidence intervals. The case was retained in the analyses.

Table 9a. Coefficients for the Subsequent Severity of Violence: Peak Intensity.

Subsequent Mean Intensity	R^2	*Adj .R^2*	*B*	*S.E.*	*p value*	*95% C.I. B*
Peak Intensity 3 & 4	0.058	0.051	0.167	0.055	0.003	0.059 – 0.275

N = 155
Source: thesis author

Table 9b. Coefficients for the Subsequent Severity of Violence: Mean Intensity Exposure.

Subsequent Mean Intensity	R^2	*Adj .R^2*	*B*	*S.E.*	*p value*	*95% C.I. B*
Mean Intensity Exposure	0.174	0.169	0.284	0.050	0.000	0.185– 0.383

N = 155
Source: thesis author

The Influence of Cumulative Duration on the Subsequent Severity of Violence

Binary logistic regression was performed to evaluate the influence of the cumulative duration of exposure on the subsequent severity of the peak intensity of violence. Earlier findings (refer back Table 5b) demonstrate that the cumulative duration of exposure to violence, at all levels of intensity, yields statistically significant correlations with subsequent occurrences of limited war and war (levels 4 and 5) (X^2=6.516, p<=0.011. This finding demonstrates that cumulative duration of exposure to violent political crises leads to the highest peak intensities of subsequent political conflict.

The Intergenerational Influence of Exposure to Violence

Finally, intergenerational correlations between exposure to violence and subsequent manifestation of violence were evaluated using binary logistic regression and linear regression. An abbreviated overview of the results is provided here with further context below, with an illustration provided in Figure 6:

- Cumulative duration of exposure, at all levels of intensity, is correlated with subsequent recent and contemporary violence across one and two generations, including for exposure occurring in the distant past. The coefficients are positive, indicating cumulative effects as duration of exposure increases.
- Mean intensity of exposure is associated with subsequent recent and contemporary violence across one generation, though not for distant past exposure. The coefficients are positive, indicating cumulative effects as mean intensity of exposure increases.
- Peak intensity of exposure is related to subsequent recent and contemporary violence across one and two generations, though not for distant past exposure. The coefficients are positive, indicating cumulative effects as peak intensity of exposure increases.

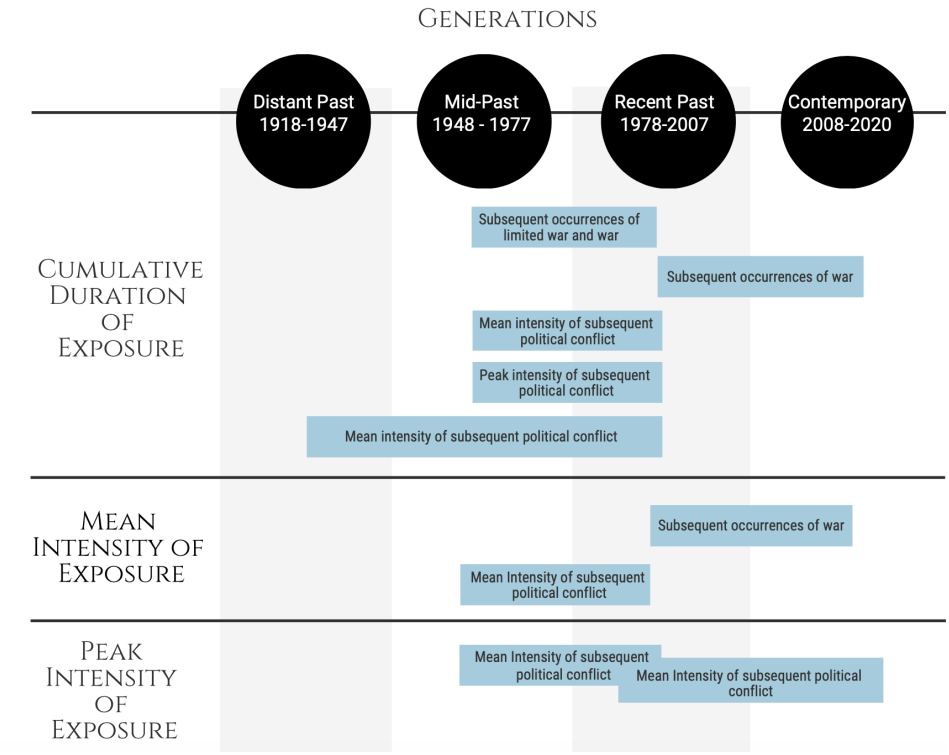

Figure 6. Outcomes of intergenerational analysis of correlations secondary to exposure to violent political crises across generations.

Source: thesis author

Binary logistic regression revealed that the cumulative duration of exposure in the mid-past (1948–1977) is correlated with subsequent occurrences of recent past violence (1978–2007) consistent with limited war and war (levels 4 and 5), X^2=5.236, p<=0.022. Additionally, cumulative duration of exposure in the recent past (1978–2007) is associated with subsequent occurrences of contemporary war (2008–2020), X^2=5.239, p<=0.022. Accordingly, persistent exposure to political crises leads to an increased likelihood of subsequent manifestations of high-level political conflict in future generations. Furthermore, linear regression demonstrated that the cumulative duration of exposure to violence in the distant past (1918–1947) is statistically significantly

correlated with the mean intensity of subsequent political violence in the recent past (1978-2007), $F(1,153)=4.301$, $p<=0.040$,[12] while the cumulative duration of exposure in the mid-past (1948-1977) is related to the subsequent mean intensity of violence in the recent past (1978-2007), $F(1,153)=9.702$, $p<=0.002$ [13]. These findings indicate that persistent exposure to violence has cumulative effects in future generations that when manifested tends towards higher levels of subsequent violence.

The above findings were also supported by statistically significant results for mean intensity of exposure and the subsequent presence or absence of political conflict in future generations. Consistent with duration of exposure, binary logistic regression confirmed a correlation between the mean intensity of exposure to violence in the recent past (1978–2007) and subsequent occurrences of contemporary war (2008–2020), $X^2=10.486$, $p<=0.001$.[14] Thus, increasing mean intensity of exposure to violent political crises is associated with an increased likelihood of subsequent manifestations of high-level political conflict. Moreover, linear regression demonstrated that the mean intensity of exposure in the mid-past (1948–1977) is associated with subsequent mean intensity of

[12] Casewise diagnostics revealed one outlier (case=Azerbaijan). Data-entry accuracy was confirmed, and the logistic regression was run with and without the case. The results remained statistically significant with no change in confidence intervals. The outlier was accepted as a genuinely unusual case and was retained in the analysis.

[13] Casewise diagnostics revealed one outlier (case=Azerbaijan). Data-entry accuracy was confirmed and the logistic regression was run with and without the case. The results remained statistically significant with no change in confidence intervals. The outlier was accepted as a genuinely unusual case and was retained in the analysis.

[14] Casewise diagnostics revealed 8 outliers. Data-entry accuracy was confirmed and the logistic regression was run with and without the cases. The results remained statistically significant. The outliers were accepted as genuinely unusual cases and were retained in the analysis.

violence in the recent past (1978–2007), $F(1,153)=4.410$, $p<=0.037$.[15] This suggests that higher sustained exposure to violence has cumulative effects in the next generation that when manifested tends toward higher levels of subsequent violence. The findings therefore support the interpretation that the effects of longer, sustained exposure are both cumulative and intergenerational.

Finally, linear regression revealed that the peak intensity of exposure to violent political crises in the mid-past (1948–1977) is statistically significantly associated with the mean intensity of subsequent manifestations of political conflicts across recent and contemporary generations (1978–2020), $F(1,153)=4.689$, $p<=0.032$. Accordingly, exposure to higher levels of violence leads to cumulative effects in future generations, that when manifested, tends towards higher levels of subsequent violence. Taken together, these results support the hypothesis that the victim-offender cycle among groups spans generations.

[15] Casewise diagnostics revealed one outlier (case=Azerbaijan). Data entry accuracy was confirmed and the logistic regression was run with and without the case. The results remained statistically significant with negligible change in confidence intervals. The outlier was accepted as a genuinely unusual case and was retained in the analysis.

Chapter V

Discussion

Ongoing violence in the international arena continues to target civilians and civilian infrastructure. Efforts to mediate conflict, minimize human rights abuses, and mitigate suffering often amount to ineffective negotiations and symbolic gestures, while selective political will to intervene continues to betray the responsibility to protect. Efforts must, therefore, focus on preventing the emergence of violence in the international arena by identifying risk factors and building the capacity to address vulnerabilities and foster resilience. However, preventing violence necessitates comprehensive understanding of its causes. Although the etiology of violence in the international arena has been explored and explained by political, economic, and socio-cultural processes, the field of international relations has marginalized psychology in the study of world politics and continues to assume away the influence of the nature and behavior of humans through blind acceptance of rational actor theory.

This study challenges the premise that state actors are static rational entities whose influence on state behavior and world politics can be presumed away. Following from this premise, this investigation considers the influence of psychology as a cause and fomenter of armed conflict. It is hypothesized that a victim-offender cycle of violence exists among groups in the international arena such that exposure to violent political crises leads to the subsequent manifestation of collective violence. It is also hypothesized that a minimum threshold of violence anticipates subsequent violence, and that the

subsequent severity of violence can be predicted by the prior intensity and cumulative duration of exposure. These relationships are proposed to occur intergenerationally.

Quantitative analysis confirmed that groups of people who have endured a violent political crisis are more likely than groups who have not endured a violent political crisis to subsequently manifest collective violence in the form of political conflict. The results demonstrate that prior exposure to serious clashes and full-scale war lead to subsequent war, while exposure to lower-intensity political crises is not correlated with future violence (refer back to Table 5a). The findings expand the scope of the conflict trap proposed by Collier and Hoeffler (2000) beyond civil violence, with at least 1,000 battle deaths, to examine the effects of interstate and internationalized intra-state crises on subsequent interstate, intra-state, sub-state and trans-state conflicts, allowing for the inclusion of crises without a minimum death threshold.

The subsequent high-level occurrences of violence were observed over seven decades. As first noted by Hegre, Nygard, and Raeder (2017), such a long-run observation period is rare. In contrast to their simulation approach and forecasting techniques based on a theoretical model, this study uses field data to represent the real behavior of states. The implications of a cycle of violence in the international arena are further expanded and explored below through the lens of psychology.

Expanding the Victim-Offender Cycle in the International Arena

Following exposure to serious clashes or full-scale war, survivors are at risk of developing anatomical and physiological changes in the nervous system that lead to constant scanning for threat detection, exaggerated emotional responses in the setting of

future threats, and a weak or absent ability to cognitively control emotions (Zhong, et al. 2019; Marusak, Martin, Etkin, & Thomason, 2015). These neurobiological changes predispose survivors to adopt aggression as a defense mechanism, with multifaceted and cumulative revictimization resulting in even greater emotional and behavioral dysregulation (Anda, et al., 2006, p. 176; Briere, Kaltman, & Green 2008, as cited in Ford, et al., 2012, p. 695; Ford, 2005). Further compounding the individual defense mechanism is the pervasive feeling of insecurity that develops within a group as the members bond over a shared sense of loss of security and control (Bar-Tal, Chernyak-Hai, Schori, & Gundar, 2009). This pervasive feeling of insecurity risks distorting the general perception and shared worldview (Staub, 2006, p. 871). Thus, in responding to future conflict the group may respond with defensive aggression, anticipating that they need to defend themselves (Staub, 2006, p. 871).

When observed over seven decades, both the cumulative duration and the mean intensity of exposure validate the peak findings noted above, and reinforce each other in their association with subsequent high-level violence. As the duration and mean intensity of exposure increase, the likelihood of subsequent manifestations of high-level political conflict also increases (refer back to Tables 5b and 5c). These findings support the interpretation that the effects of prolonged and sustained exposure are cumulative, compounding vulnerabilities and leading to greater risk of future violence. Conversely, in the setting of exposure to extreme intensities consistent with full-scale war, violence need not be prolonged or sustained in order to lead to future limited-war or war (refer back to Table 5d). Accordingly, despite the strong influence of prolonged and sustained

exposure, the psychological impact of brief, yet, extreme violence is also shown to be sufficient to initiate a cycle of violence.

The influence of duration, across all intensities of violence, suggests that the disruption of every-day socioeconomic activities, even in the setting of low levels of violence, affects group psychology. The depth of the impact of the duration of exposure can range from the anxiety that accompanies the brief disruption of income-generating activities for those already living on the edge of subsistence, to the erosion of dignity that accompanies the loss of income-generating activities and social safety nets in the setting of persistent violence. The findings also demonstrate that in the setting of prolonged duration of exposure, the intensity of violence must be both severe and sustained in order to also significantly contribute to the subsequent violent outcome (refer back to Table 5e). This speaks to a greater impact of prolonged duration on the psychology of survivors.

Prolonged exposure to violence, whether high-intensity or low-intensity, becomes an altered way of life with sequelae that seem impossible to escape even after violence ends. It is experienced as a loss of security and well-being that accompany the collapse of entire socioeconomic infrastructures. Livelihoods are defined by risk and vulnerability, and social supports dissolve through death and displacement. Temporary camps for the displaced become embittering long-term settlements. A generation of children, particularly girls, experience the loss of hope and expectancy that come with secure and reliable access to education. Increasingly fragile food systems and reduced access to health services give way to suffering from famines and communicable diseases. Moreover, the destruction of cultural heritage contributes to a sense of loss of cultural

history and identity. The psychological impact of fear and trauma accumulate over years and, in some cases, decades.

As observed in interpersonal relations, many survivors of childhood abuse and maltreatment do not subsequently engage in criminal behavior or violent offences. This resilience is likewise presumed to occur in the international arena. Resilience has been associated with empathy, hope and expectancy, school engagement, peer group affiliations, and wider social support within the individual unit of analysis (Lambie & Johnston, 2016; Lambie, Seymour, Lee, & Adams, 2002; Wilcox, Richards, & O'Keeffe, 2004; Williams & Nelson-Gardell, 2012). If such a correlation exists in the international arena, it may be evidenced by the positive coping of the Rwandans in the setting of widespread inclusivity, social equity, and peacebuilding in the aftermath of the 1994 genocide. Despite the macabre events of the genocide associated with a polarized population and deep resentments, Rwanda is notable for its lack of ongoing civil unrest and ethnic violence. As one of the fastest-growing economies in Africa, which has successfully positioned itself among stable countries globally, Rwanda has also evaded the poverty-insecurity nexus that drives the cycles of violence and poverty, as advanced by Collier (2008). Rwanda's remarkable ability to recover and prosper as a nation speaks to a collective resilience that deserves greater understanding.

Conversely, despite its standing as Africa's second largest economy, South Africa remains afflicted by persistent violent crime and, more recently, violent civil unrest (World Bank Group, 2021). The legislated apartheid system in South Africa ended in 1994 and apartheid has since been recognized as a crime against humanity by the Rome Statute of the International Criminal Court. Yet, entrenched social patterns in South

Africa and a failure to redistribute land and resources sustains ongoing racial and spatial inequalities. Furthermore, unlike Rwanda's Gacaca Community Courts, South Africa's Truth and Reconciliation Commission prioritized truth over justice. Victims were given the opportunity to share their testimonials, but those who benefitted from apartheid escaped responsibility by the failure to prosecute individuals.

Such a parallel in interpersonal relations yields a context in which child abuse is recognized and investigated by Child Protective Services (CPS), even though the decision is made to return a child to his/her home with no charges against the abuser(s). Perhaps the overt abuse stops with CPS oversight, but the same family structures and power relations remain intact. The child remains powerless while the threat of violence lingers or covert violence continues. Despite CPS validation of ongoing abuse, it would be unsurprising if a psychological toll accrued. The same can be said regarding South Africa's victims of apartheid. Resilience is unlikely where ongoing structural violence restricts access to social supports, peer group affiliations remain dependent on racial and spatial inequalities, disparities in access to education persist, and hope and expectancy for true structural change has faded.

Exploring the Victim-Offender Cycle in the International Arena

The results of my research confirm that minimum thresholds of exposure to violence anticipate the subsequent manifestation of political conflicts. A threshold is present for both peak and mean intensities of exposure, as well as duration of exposure. A peak threshold is present for exposure consistent with serious clashes and full-scale war, which lead to subsequent war (refer back to Table 5a). All lower levels of peak violence are non-significant. A threshold of mean intensity of exposure as low as 1.5 is associated

with subsequent war; whereas all lower mean intensities of violence are non-significant (refer back to Table 6a). Moreover, a cumulative duration greater than five years anticipates subsequent limited war and full-scale war, while the mean intensity of subsequent conflict is anticipated by a cumulative duration greater than two years (refer back to Tables 7a and 7b). These results substantiate the hypothesis that a minimum threshold of suffering is necessary to induce a group of people to traverse a forbidding psychological threshold that leads to maiming and killing. Evaluating the targeted-population density and the spatial extent of violence in future research will further assist in assessing the extent to which the social fabric must be compromised in order to reach threshold.

Both the intensity and duration of exposure to violent political crises anticipate the subsequent severity of violence directed toward the targeted group. The consistency of the separate findings for the three explanatory variables validates and reinforces each other in their association with the subsequent severity of violence. Exposure to serious clashes and full-scale war anticipates subsequent war, and a higher mean intensity of exposure forecasts a higher mean intensity of subsequent manifestations of violence (refer back to Tables 5a and 8b). Additionally, the cumulative duration of exposure to violent political crises anticipates subsequent limited-war and war (Table 5b). These results are further supported by the findings of psychological research at the interpersonal level. More persistent and extensive maltreatment, inclusive of multiple types of victimization, has been associated with higher rates of delinquency and violent convictions (Hurren, Stewart, & Dennison, 2017; Malvaso, Delfabbro, Day, & Nobes, 2018).

The Intergenerational Transmission of the Victim-Offender Cycle

Finally, the interval of time between exposure to violence and subsequent manifestation of violence is shown to extend across generations, thereby supporting the theory of intergenerational transmission of trauma. This is in keeping with epigenetics, in addition to clinical and social psychology, all of which have sought to explore and explain the prevalence of psychopathology among the descendants of mass trauma survivors. Although the cumulative duration of exposure anticipates a greater number of correlations across all generations, both peak and mean intensity in mid- and recent-past generations also endorse subsequent manifestations of violence in recent and contemporary generations (refer back to Figure 5). Although in most cases the subsequent occurrence of violence occurred in the next generation, in one case the violence skipped a single generation; in another, subsequent manifestations of violence extended across two generations (refer back to Figure 5).

Epigenetic research has demonstrated that biological alterations in gene expression secondary to emotional trauma are inherited by the offspring of trauma survivors (Curry, 2019). The effects of altered gene expression are compounded by processes inherent in clinical and social psychology. Exposure to mass referencing and persistent fear-based survival messages, in the absence of effective modeling, erodes the ability of subsequent generations to establish a worldview that encompasses safety and security (Bar-Tal, 2007, pp. 1444–1445; Bar-Tal, Chernyak-Hai, Schori, & Gundar, 2009, p. 247).

In an attempt to restore safety and security in the world, subsequent generations unconsciously adopt patterns of behavior that demonstrate an excessive need for control,

in addition to immature dependency (Danieli, et al., 2015, p. 233). An excessive need for control may express itself as aggression as subsequent generations strive to protect and defend themselves (Ford, Fraleigh, & Connor, 2010, cited in Ford, Chapman, Connor, Cruise, 2012, p. 698; Marsee, 2008, cited in Ford, Chapman, Connor, Cruise, 2012, p. 698; Ford, Chapman, Mack, & Pearson, 2006, cited in Ford, Chapman, Connor, Cruise, 2012, p. 698). Thus, trauma in a people leads to a collective psychology that risks predisposing subsequent generations to perpetrate future violence in attempts to preemptively defend themselves against threats.

Limitations and Future Research

In the field of international relations, *perpetrator* is synonymous with *aggressor*—a highly contentious label that risks being laden with bias when making the distinction between aggressor and victim of aggression. Labeling a group, state, or nation as an aggressor requires a valid and reliable measure that is not presently available in databases of armed conflict. Fatalities data, such as battle deaths, may satisfy this requirement such that groups with battle deaths below a specified threshold relative to the other conflict actor could be objectively distinguished as the perpetrator. Notably, though, this process would be fraught with ambiguity, particularly in multi-actor conflicts. Due to the limitations of time, an analysis of battle deaths was precluded.

The inability to objectively operationalize perpetrator in the international arena diminishes the precision with which the results of this analysis can be interpreted. The psychological phenomenon that drives an abused child to perpetrate future domestic violence is distinct from the phenomenon that leads an abused child to subsequently become a battered spouse. This same distinction needs to be made among groups when

evaluating the victim-offender cycle in the international arena. The inability to distinguish subsequent perpetration of violence from subsequent re-exposure to violence results in the inability to distinguish two different psychological phenomena when analyzing the cycle of violence among groups. Future research needs to identify an objective measure to make this distinction.

The subsequent manifestation of violence in this analysis also does not differentiate between primary aggressors and third parties. At the individual unit of analysis, victims who become offenders commit acts of violence against innocent third parties, indicating that the underlying psychology driving the cycle does not stem from a basic desire for revenge against the primary perpetrator. The goal of this study is to determine whether the underlying psychology that motivates the cycle of violence at the individual level drives a comparable cycle of violence among groups. This necessitates future efforts to minimize the influence of a retributive psychology.

Comparable to the early stages of exploring the victim-offender cycle at the interpersonal level, the cycle of violence in international relations requires future research that: (1) is prospective, (2) progresses beyond analyzing violence as a dichotomous variable to explore the varying effects of different types of violence in the international arena, (3) includes an analysis of the targeted-population density of each conflict actor, as well as the spatial extent of violence, to evaluate the extent of the social fabric affected within each given state; (4) replicates and expands the analysis of the chronicity, frequency, and severity of a group's exposure to violence, (5) evaluates the moderating role of political, economic, and socio-cultural conditions, and (6) explores resilience in

the international arena. Given the findings of this analysis, subsequent research can narrow the focus of violence to higher intensities of exposure.

Summary

It has been widely accepted that the structure of the international system conditions state relations. While the establishment of international institutions and the concomitant development of international laws has escorted in an era that has witnessed a comparative dampening of interstate conflicts, the era has also observed a concurrent rise in intra-state, sub-state, and trans-state conflicts, in which non-state actors have been compelled to incite and drive violence in the international arena. The impetus that compels non-state actors to ignore the laws of states and take up arms reveals micro-forces of human nature at play. The field of psychology offers the opportunity to explore and understand the forces of human nature and behavior that have transformed relations in the international arena. It will take such enhanced understanding of social-psychology to successfully respond to and prevent future violence within and among nations. Addressing the psychological impacts of trauma will benefit, not only, the well-being of individuals, but will, concurrently, enrich social capital; thereby, enhancing the future outcomes of whole societies impacted by armed conflict (Haer, Scharpf, & Hecker, 2021).

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